Open Rank Research Scientist in Accelerator Physics and Engineering - 12964

Biodesign Center for Applied Structural Discovery – CXFEL

We invite you to apply to our full-time open-rank Research Scientist position available developing ultrafast laser techniques at our Compact X-ray Free-Electron Laser (CXFEL) laboratory at Arizona State University (ASU).

Our CXFEL facility comprises 12,000 sq. ft. of state-of-the-art laboratory space in the new Biodesign C building at the Tempe campus. ASU has embarked on a multi-phase project to develop powerful x-ray beams, beginning with the compact x-ray light source (CXLS) that is now under construction. CXLS uses a compact electron accelerator and high power lasers to produce x-rays via inverse Compton scattering (ICS). Our CXFEL laboratory is equipped with a Yb:KGW femtosecond laser system that provides ultrashort UV pulses for electron injection, and a Yb:YAG thin-disk regenerative amplifier capable of delivering 200 mJ pulses at 1kHz repetition rate for ICS, to produce X-rays tunable between 100eV to 40 keV. The ultrafast x-ray sources will be employed for time-resolved studies of atomic and molecular processes, quantum materials, chemical dynamics, and biological phenomena.

Required Qualifications:

- Applicants must have a Ph.D in Physics or Electrical Engineering or a closely related field
- Demonstrated knowledge of high brightness electron accelerator technology
- Excellent verbal, presentation, and technical report writing skills
- Ability to work within multidisciplinary project team

Preferred Qualifications: Preference will be given to candidates who have experience in one or more of the following areas: high-brightness electron beam R&D, accelerator operations, electron beam drivers for XFELs, electron beam diagnostics, inverse Compton sources.

In this position, you will take on a leadership role in R&D in high-brightness electron beam physics especially hands-on operations experience. Optimization and operation of magnetic lattice, electron beam transport, pulsed RF systems, and beam diagnostics. Operating photoinjectors and controls for diagnostics of photon and electron beams. Training and supervising graduate and undergraduate students. Highly skilled technical writing including lab reports, scientific presentations and publications, and grant applications. Working in multidisciplinary teams that span different research areas and academic units.

To apply, please submit to okedhiring@asu.edu as a ***single pdf document*** the following materials with subject line: "**Application for Open Rank Research Scientist in Accelerator Physics and Engineering**".

1. A cover letter specifying relevant qualifications and training,
2. Curriculum Vitae or Resume
3. Statement of current research interests and expertise (2-page maximum)
4. Contact information for at least three professional references, and 5)
5. List of recent publications.

Initial review of applications will begin on **August 26, 2019**. As long as the position is not filled, review will continue every week thereafter until the search is closed. A background check is required for

employment. The initial appointment will be for one year with possible extension to two years contingent on performance. The salary will be commensurate with achievements and experience. Questions should be addressed to **Dr. William Graves** at wsg@asu.edu.

ASU Knowledge Enterprise advances research, innovation, strategic partnerships, entrepreneurship, and international development. Our success arises from solutions-focused, interdisciplinary research; an entrepreneurial approach that is embedded in every school and department; and a commitment to transform society in a positive way. http://research.asu.edu/

For the fourth year in a row, ASU has been named the most innovative school in the nation, recognizing the university's culture of groundbreaking research and partnerships, as well as its commitment to helping students thrive in college and beyond. U.S. News and World Report has named ASU as the most innovative university all four years the category has existed.

Arizona State University is a new model for American higher education, an unprecedented combination of academic excellence, entrepreneurial energy and broad access. This New American University is a single, unified institution comprising four differentiated campuses positively impacting the economic, social, cultural and environmental health of the communities it serves. ASU serves more than 80,000 students in metropolitan Phoenix, Arizona, the nation's fifth largest city. ASU champions intellectual and cultural diversity, and it welcomes students from all fifty states and more than one hundred nations across the globe. ASU is in the Phoenix metropolitan area in Tempe, Arizona and is one of the largest universities in the U.S. The Academic Rankings of World Universities has included ASU in the top-100 list of research universities and ASU tops the 2015 thru 2018 U.S. News & World Report list of most innovative schools in the US.

Arizona State University is an Equal Opportunity/Affirmative Action Employer. All qualified applicants will be considered without regard to race, color, sex, religion, national origin, disability, protected veteran status, or any other basis protected by law.